IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	Menon
Serial No.:	09/521,442
For:	METHOD OF TREATING SKIN CONDITIONS
Filed:	March 7, 2000
Examiner:	J. Venkat
Art Unit:	1615
Confirmation No.:	1007
Customer No.:	27,623

Attorney Docket No.: 680.0035USU

APPEAL BRIEF UNDER 37 C.F.R. 41.37

Mail Stop Appeal Brief
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REAL PARTY IN INTEREST

The real party in interest is Avon Products, Inc., the assignee of record.

RELATED APPEALS AND INTERFERENCES

There are none.

STATUS OF THE CLAIMS

Claims 36 to 51 have been rejected. Claims 36 to 51 are being appealed.

STATUS OF AMENDMENTS

There were no amendments filed subsequent to final rejection.

SUMMARY OF THE CLAIMED SUBJECT MATTER

The claimed invention relates to a method of ameliorating or treating cellulite (page 13, line 21; original claim 5). The method has the step of topically applying perilla oil (page 6, line 4; original claim 2) to an area of skin affected by cellulite in an amount effective to improve the aesthetic appearance thereof (page 13, line 7; original claim 1). The perilla oil may be applied at about 0.01 wt% to about 10 wt% based on the total weight of the topical composition (page 14, lines 17 and 18; original claim 10; at about 1 wt% to about 8 wt% (page 14, lines 19 and 20; original claim 11); or at about 3 wt% to about 6 wt% (page 14, line 22). A preferred perilla oil is perilla seed oil (page 14, line 5; original claim 3). The perilla oil may be topically applied one or two times per day (page 15, lines 11 and 12).

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Is the claimed invention enabled under 35 U.S.C. 112, first paragraph?

ARGUMENT

The Office Action mailed January 4, 2006 stated that the present claims failed to comply with the enablement requirement. The Action also stated that there was no etiology for the treatment of cellulite. In support of this statement, the Action quoted from an abstract for the article Avram, Cellulite: a review of its physiology and treatment, J. Cosmetic & Laser Therapy, v. 6, Issue 4, p. 181-5 (Dec. 2004): "There are no truly effective treatments for cellulite". The Action also quoted from an abstract for the article Van Vliet, An assessment of traditional and novel therapies for cellulite, J. Cosmetic & Laser Therapy, 2005, 7/1 (7-10) for the proposition that "… there is no consensus as to the etiology of cellulite".

The claimed invention is indeed enabled under 35 U.S.C. 112, first paragraph, as shown in the remarks below and the attached Declaration under 37 C.F.R. 1.132 by Dr. Peter M. Elias, which was previously submitted in the Amendment Under 35 C.F.R. 1.116 mailed May 19, 2006. The reasons for such enablement and Applicant's remarks regarding assertions of non-enablement in the prosecution history are discussed below.

A). The Specification clearly and unambiguously discloses and enables the claimed invention.

At page 1, lines 10 to 13, the Specification states that the invention relates to topical compositions and methods useful to treat cellulite associated with upregulation of peroxisome proliferator activated receptors (PPARs). At page 1, line 16, the Specification states that PPARs are known to play a fundamental role in regulating energy balance, particularly glucose and lipid metabolism. It is further stated that there are a family of PPARs: PPARalpha, PPARgamma and PPARbeta/sigma.

At page 4, the Specification states as objects of the invention the improvement in the appearance of skin affected by cellulite, and providing a method of treating a skin condition resulting from or accompanied by an upregulation of PPAR receptors. In the last paragraph at page 4, the invention is summarized as a method of administering a topical composition having at least one PPAR stabilizer to skin affected, *inter alia*, by cellulite.

Perilla oil and particularly perilla seed oil is disclosed as a PPAR stabilizer. At page 14, line 14 et seq., the Specification states that perilla oil as the PPAR stabilizer is applied directly to the skin, preferably incorporated in a topical composition.

In Example 1 commencing at page 16, the effect of perilla seed oil on PPAR upregulation in human skin cells for a known PPAR agonist was measured by relative peroxisome proliferator response element (PPRE). The results were provided in Fig. 1 and demonstrate that the addition of perilla seed oil prevented the PPAR upregulation of the known PPAR agonist.

In Example 2 commencing at page 17, the addition of perilla seed oil (in DMSO) to cells treated with a PPAR agonist significantly prevents PPAR upregulation, as illustrated graphically in Fig. 2. Even in the presence of the agonists, the perilla seed oil (in DMSO) maintains PPRE activity in the range exhibited by the vehicle alone.

B). The Examiner's reliance on the Avram and Van Vliet references is misplaced.

Avram identifies four hypotheses for the physiology of cellulite (sexually dimorphic skin architecture, altered connective tissue septae, vascular changes and inflammatory factors) and further identifies four categories of treatment modalities (attenuation of aggravating factors, physical and mechanical methods, pharmacological agents and laser). The sentence quoted above and relied on by the Examiner as the linchpin of her Section 112 rejection is a qualitative one, inasmuch as the phrase "effective treatment" is modified by the adverb "truly".

Van Vliet states, "There are **numerous treatments** for cellulite including topical, surgical, laser and other therapies". (Emphasis added.) As to the causation of cellulite, Van Vliet merely indicates that there is no consensus regarding the etiology of cellulite. Lack of consensus regarding etiology does not constitute or equate to lack of etiology or predictability.

Moreover, searching located 20 U.S. patents disclosing compositions claimed to be useful in treating cellulite. A copy of a listing of the patents (together with written description

and bibliographic information) is attached herewith. Apparently, the etiology, physiology of formation, and anatomical structure of cellulite are understood well enough that numerous compositions for treating cellulite have been proposed and patented. It is evident that the Examiner's assertion that there is no etiology for the treatment of cellulite is erroneous.

C. The Declaration of Dr. Peter Elias rebuts the Examiner's contention that a nexus is absent between the in vitro results in the working examples and the in vivo effect.

Dr. Peter Elias[1] is a Professor of Dermatology and Vice Chairman of the Department of Dermatology at the University of California at San Francisco. He is the author of over 400 journal articles pertaining to skin biology and has conducted extensive research in this field. He is Board Certified in Dermatology and Dermatopathology, and has received numerous honors, awards, and recognitions.

In his Declaration, Dr. Elias states that disclosure of the present application clearly articulates the invention as set forth in the claims 36 to 51 and places him, a person skilled in the art, in possession of it. Dr. Elias states that Examples 1 and 2 of the present application clearly demonstrate the stabilizing effect of perilla oil on PPAR upregulation. Dr. Elias states that page 1, lines 12 and 13 of the 09/521,442 application directly associates the treatment or amelioration of cellulite with the upregulation of PPAR, and that this association is logical and reasonable.

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[1] Dr. Elias has been a consultant of Avon Products, Inc., and was paid for reviewing the Office Action including the references,

The Continuation of Substance of Interview of the Interview Summary of October 12, 2005 stated there was no nexus between cellulite and the prevention of upregulation of PPAR. The Continuation of Substance of Interview further stated that competent documentation establishing this nexus would be given careful consideration. The Examiner repeated this position in her Advisory Action mailed June 6, 2006, stating that the Declaration of Dr. Elias was an opinion declaration (see Continuation Sheet).

Applicant strongly asserts that a nexus does indeed exist between cellulite and the upregulation of PPARgamma receptors, as manifestly made clear by Dr. Elias in his Declaration.

Dr. Elias describes the pathology of cellulite as taking "...the form of a localized proliferation of fibroblasts and adipocytes. Fibroblasts readily transform into adipocytes .... The process of fibroblast-to-adipocyte metamorphosis results in a gradual accumulation of adipocytes over time." Declaration at page 2.

After considering the experimental data set forth in Examples 1 and 2, coupled with the foregoing description of the pathology of cellulite, Dr. Elias concludes that the association of PPAR upregulation with the treatment or amelioration of cellulite is logical and reasonable. See Declaration at page 2.

In support of this conclusion, Dr. Elias stated the following:

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reviewing the application, and for preparing his Declaration, at his customary hourly rate.

"PPARgamma receptors regulate adipocyte growth and differentiation. Hence, ligand activators (agonists) of PPARgamma receptors, such as ciglitazone, stimulate adipocyte growth. Because adipocytes are stimulated, i.e., up-regulated, they proliferate and hypertrophy in response to treatment with PPARgamma ligand agonists. It follows that blocking PPARgamma receptors would be a suitable means for treating or ameliorating cellulite. PPARgamma blocking can be achieved by two different mechanisms: 1) down-regulation of PPARgamma receptor levels, and 2) competitive inhibition with endogenous PPARgamma activators, such as leukotriene B4, thereby reducing (i.e., stabilizing) the numbers of PPARgamma receptors that are available to be activated.

The examples of the above-captioned application demonstrate that there is a reduction of PPRE activity when perilla oil is combined with G3, a known PPAR ligand agonist, as compared to the level of PPRE activity when G3 is tested alone. This decrease in PPRE activity indicates perilla oil is a stabilizer of PPAR, which is a legitimate mechanism to treat cellulite production and retention in a human."

For these reasons Dr. Elias concludes blocking PPARgamma receptors would be a logical means for treating or ameliorating cellulite since PPARgamma receptors regulate adipocyte growth and differentiation. Dr. Elias states that blocking could be achieved by two different mechanisms: 1) down-regulation of PPARgamma receptor levels, and 2) competitive inhibition with endogenous PPARgamma activators, thereby reducing (i.e., stabilizing) the number of PPARgamma receptors that are available to be activated.

In his Declaration, Dr. Elias set forth a clear, factual, underlying basis for his opinion. He described the role of PPARgamma receptors in the skin and how their activity can be regulated. The description in his Declaration is consonant with the description of PPAR stabilizers in the specification at p. 5, line 17 to p. 6, line 15. He also correlated the regulation of

PPARgamma receptors with the treatment of cellulite production and retention. This correlation effectively bridges the *in vitro* results with *in vivo* effect of the claimed invention. The bridging provides a legal basis for a finding of enablement with respect to the claimed invention without relying on Dr. Elias' Declaration as an opinion in that regard.

Applicant recognizes that opinion evidence cannot be used to form the sole basis for a legal conclusion. Nonetheless, the underlying basis and facts supporting the basis of an opinion are entitled to consideration (see MPEP 716.01(c)(III)). With regard to his opinion, Dr. Elias states at page 3 of the Declaration that he disagrees with the position of the Examiner "…based upon many years of work with the PPAR family of activators, and their effects on cutaneous development, growth, differentiation, barrier function, and inflammation. I have over 30 publications during the past 10 years that focus on the effects of PPAR activators in skin biology. Therefore, I feel qualified to comment on this subject."

In light of the foregoing arguments and in particular the statements of Dr. Elias in his Declaration, Applicant submits that a sufficient showing of enablement, including a showing of the nexus between the formation of cellulite and the upregulation of PPARgamma receptors, has been made. Favorable reconsideration of claims 36 to 51 is thus warranted, and allowance of the pending claims is earnestly solicited.

Respectfully submitted,

Dated: November 6, 2006

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CLAIMS APPENDIX

36. (Previously presented) A method of ameliorating or treating cellulite, comprising topically applying perilla oil to an area of skin affected by cellulite in an amount effective to improve the aesthetic appearance thereof.

37. (Previously presented) The method of claim 36, wherein the perilla oil is applied in the form of a topical composition having about 0.01 wt% to about 10 wt% of the perilla oil based on the total weight of the topical composition.

38. (Previously presented) The method of claim 36, wherein the perilla oil is applied in the form of a topical composition having about 1 wt% to about 8 wt% of the perilla oil based on the total weight of the topical composition.

39. (Previously presented) The method of claim 36, wherein the perilla oil is applied in the form of a topical composition having about 3 wt% to about 6 wt% of the perilla oil based on the total weight of the topical composition.

40. (Previously presented) The method of claim 36, wherein the perilla oil is perilla seed oil.

41. (Previously presented) The method of claim 37, wherein the perilla oil is perilla seed oil.

42. (Previously presented) The method of claim 38, wherein the perilla oil is perilla seed oil.

43. (Previously presented) The method of claim 39, wherein the perilla oil is perilla seed oil.

44. (Previously presented) The method of claim 36, wherein the perilla oil is topically applied one or two times per day.

45. (Previously presented) The method of claim 37, wherein the perilla seed oil is topically applied one or two times per day.

46. (Previously presented) The method of claim 38, wherein the perilla seed oil is topically applied one or two times per day.

47. (Previously presented) The method of claim 39, wherein the perilla seed oil is topically applied one or two times per day.

48. (Previously presented) The method of claim 40, wherein the perilla seed oil is topically applied one or two times per day.

49. (Previously presented) The method of claim 41, wherein the perilla seed oil is topically applied one or two times per day.

50. (Previously presented) The method of claim 42, wherein the perilla seed oil is topically applied one or two times per day.

51. (Previously presented) The method of claim 43, wherein the perilla seed oil is topically applied one or two times per day.

EVIDENCE APPENDIX

1. Declaration under 37 C.F.R. 1.132 by Dr. Peter M. Elias

2. Avram, Cellulite: a review of its physiology and treatment, J. Cosmetic & Laser Therapy, v. 6, Issue 4, p. 181-5 (Dec. 2004)

3. Van Vliet, An assessment of traditional and novel therapies for cellulite, J. Cosmetic & Laser Therapy, 2005, 7/1 (7-10)

4. Report of issued U.S. patents disclosing compositions claimed to be useful in treating cellulite

RELATED PROCEEDINGS APPENDIX PAGE(S)

None

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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For:	METHOD OF TREATING SKIN CONDITIONS
Filed:	March 7, 2000
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Art Unit:	1615
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Attorney Docket No.: 680.0035USU

DECLARATION UNDER 37 C.F.R. 1.132

I, Peter M. Elias, M.D., declare the following:

I received a B.A. degree in biological sciences from Stanford University in 1963, an M.D. degree from the University of California at San Francisco in 1967, and an M.S. degree in experimental pathology from the University of California at San Francisco in 1975. I have practiced dermatology from 1974 to the present. I am currently a Professor of Dermatology and Vice-Chairman in the Department of Dermatology at the University of California at San Francisco. I have conducted research in dermatology and skin diseases since 1969. I have authored or co-authored at least 422 publications pertaining to skin biology and dermatology as listed in the attached Curriculum Vitae.

Cellulite is a cosmetically-disfiguring condition in which afflicted skin can look like orange peel. Cellulite is typically localized at the thighs, hips, or abdomen of women, although cellulite can also afflict males. The microscopic pathology of

cellulite takes the form of a localized proliferation of fibroblasts and adipocytes. Fibroblasts readily transform into adipocytes with appropriate hormonal/growth factor signaling. The process of fibroblast-to-adipocyte metamorphosis results in a gradual accumulation of adipocytes over time. As triglycerides accumulate in adipocytes, these cells hypertrophy and ultimately restrict venous and lymphatic drainage from affected sites.

I have reviewed the contents of the above-captioned application, including the pending claims and the working examples, and the Office Action mailed January 4, 2006 and understand them.

I disagree with the Examiner's assertion of lack of enablement for claims 36 to 51 in the Office Action. The disclosure of the above-captioned application clearly articulates the invention as set forth in the claims 36 to 51 and places me, a person skilled in the arts of skin biology and dermatology, in possession of it. Examples 1 and 2 of the above-captioned application clearly demonstrate the stabilizing effect of perilla oil on PPAR upregulation in the presence of known PPAR agonists. Page 1, lines 12 and 13 of the above-captioned application directly associates the treatment or amelioration of cellulite with the upregulation of PPAR and this association is logical and reasonable, particularly in view of my observations in the following paragraph.

I have also reviewed the Interview Summary appended to the Office Action. The Continuation of Substance of Interview appended to the Interview Summary states in the last two sentences that "The examiner informed [applicant] that there is

no nexus between cellulite and the prevention of upregulation of PPAR. Competent documentation establishing this nexus would be given careful consideration." I disagree with this conclusion, based upon many years of work with the PPAR family of activators, and their effects on cutaneous development, growth, differentiation, barrier function, and inflammation. I have over 30 publications during the past 10 years that focus on the effects of PPAR activators in skin biology. Therefore, I feel qualified to comment on this subject.

After reviewing the above-captioned application, including the examples, I believe there is a nexus between the formation of cellulite and the upregulation of PPARgamma.

PPARgamma receptors regulate adipocyte growth and differentiation. Hence, ligand activators (agonists) of PPARgamma receptors, such as ciglitazone, stimulate adipocyte growth. Because adipocytes are stimulated, i.e., up-regulated, they proliferate and hypertrophy in response to treatment with PPARgamma ligand agonists. It follows that blocking PPARgamma receptors would be a suitable means for treating or ameliorating cellulite. PPARgamma blocking can be achieved by two different mechanisms: 1) down-regulation of PPARgamma receptor levels, and 2) competitive inhibition with endogenous PPARgamma activators, such as leukotriene B4, thereby reducing (i.e., stabilizing) the numbers of PPARgamma receptors that are available to be activated.

The examples of the above-captioned application demonstrate that there is a reduction of PPRE activity when perilla oil is combined with G3, a known PPAR ligand agonist, as compared to the level of PPRE activity when G3 is tested alone. This decrease in PPRE activity indicates perilla oil is a stabilizer of PPAR,

which is a legitimate mechanism to treat cellulite production and retention in a human.

I am not aware that PPARgamma stabilizers have been employed to treat cellulite in the skin biology or dermatology art outside of the disclosure in the above-captioned application. More specifically, I am not aware that perilla oil has been employed to treat or ameliorate cellulite in the skin biology or dermatology art outside of its disclosure in the above-captioned application. The use of PPARgamma stabilizers, and, more particularly, perilla oil, in the treatment or amelioration of cellulite is new and not obvious to me.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

PMR Elias

Dr. Peter M. Elias

May 15, 2006

date

Back **1 page(s) will be printed.**

Record: 1

Title: Cellulite: a review of its physiology and treatment.

Authors: Avram, Mathew M.[1] *mavram@mednet.ucla.edu*

Source: Journal of Cosmetic & Laser Therapy; Dec2004, Vol. 6 Issue 4, p181-185, 5p

Document Type: Article

Subject Terms: *CELLULITE
*CRITICAL periods (Biology)
*FEMALES
*PHYSIOLOGY
*PUBERTY
*THERAPEUTICS

Abstract: Cellulite affects 85-98% of post-pubertal females of all races. While not a pathologic condition, it remains an issue of cosmetic concern to a great number of individuals. Despite its high prevalence, there have been few scientific investigations into the physiology of cellulite. There have only been a few dozen peer-reviewed articles devoted to cellulite in the medical literature in the past 30 years. There is no definitive explanation for its presentation. This greatly complicates the ability to treat or improve it. The four leading hypotheses that purport to explain the physiology of cellulite include: sexually dimorphic skin architecture, altered connective tissue septae, vascular changes and inflammatory factors. Treatment modalities can be divided into four main categories: attenuation of aggravating factors, physical and mechanical methods, pharmacological agents and laser. There are no truly effective treatments for cellulite. [*ABSTRACT FROM AUTHOR*]

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An assessment of traditional and novel therapies for cellulite

Van Vliet M.; Ortiz A.; Avram M.M.; Yamauchi P.S.
M.M. Avram, Apt. 222, 2700 Neilson Way, Santa Monica, CA 90405 United States

Journal of Cosmetic and Laser Therapy (J. COSMET. LASER THER.) (United Kingdom) 2005, 7/1 (7-10)
CODEN: JCLTC ISSN: 1476-4172
DOCUMENT TYPE: Journal ; **Review**
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 30

There are numerous **treatments** for **cellulite** including topical, surgical, laser and other therapies. Many of these **treatments** are expensive. Part of the difficulty in **treating cellulite** arises from our incomplete understanding of this phenomenon. As noted previously in this journal, there is no consensus as to the etiology of **cellulite** . This article will focus on both traditional and novel **treat**ments for **cellulite** and assess their efficacy based on the scientific literature.

	A	B	C	D	E	F	G
1	**PATENTS CLAIMING TREATMENT OF CELLULITE**						
2	Title	Grant Date	Publication Number	Abstract	First or Exemplary Claim	Examiner - Primary	Examiner - Assistant
3	Use of conjugated linoleic acid (CLA) for the topical treatment of cellulite	10/11/2005	US6953583	The present invention relates to the use of conjugated linoleic acid (CLA) for the topical treatment of fatty deposits and cellulite and to new topical compositions and to cosmetic and dermatological topical compositions for the treatment of fatty deposits and cellulite comprising CLA as well as kits comprising CLA for said treatment.	1. A method of treating fatty deposits and cellulite of a person, comprising: determining the presence of dimpled skin of the person; and contacting the skin with a composition comprising: from 2 to 70 weight percent of at least one of: (a) at least one conjugated linoleic acid as a free acid or a combination of conjugated linoleic acids, each of the conjugated linoleic acids of the combination being a free acid, (b) at least one salt of at least one conjugated linoleic acid, the salt comprising at least one an alkaline metal, an alkaline earth, ammonia, monoethanolamine, diethanolamine, and triethanloamine, and (c) a combination of (a) and (b). □	Kunz; Gary	Lamm; Marina
4	Compositions comprising a sapogenin and a xanthine and methods of using the same	4/12/2005	US6878367	Compositions which comprise, in a physiologically acceptable medium, at least one sapogenin or a derivative or natural extract containing the same, and at least one xanthine base are useful, in particular, for preventing or combating cellulite and/or for refining the figure or the contours of the face. Preferably, the composition comprises diosgenin or an extract of wild yam, combined with caffeine.	1. A composition which comprises, in a physiologically acceptable medium: (A) at least one sapogenin selected from the group consisting of diosgenin, hecogenin, smilagenin, sarsapogenin, tigogenin, yamogenin, yuccagenin, a natural extract containing diosgenin, a natural extract containing hecogenin, a derivative of diosgenin, a derivative of hecogenin, and mixtures thereof; and (B) at least one xanthine base or a plant extract containing the same. □	Page; Thurman K.	Bennett; Rachel M.
5	Antiadipose topical treatment composition based on garlic bulbs extracts, and cosmetic and therapeutic uses	2/8/2005	US6852343	The invention relates to an antiadipose topical treatment composition comprising an effective amount of at least one antiadipose active agent chosen from extracts of Allium sativum bulbs, with the exception of an oleoresin extracted with hexane, and a cosmetically or pharmaceutically acceptable excipient which is suitable for topical application for external use—especially on the skin. The invention covers the uses of this composition and of its extracts cosmetically for treating cellulite and localized dermal excess adipose, and therapeutically for treating obesity.	1. A method of treating cellulite in a patient in need of treatment thereof, comprising: topically administering to said patient an effective amount of an extract of Allium sativum to areas of the skin of said patient to be treated, and wherein between 3 ppm and 20 ppm of extract of Allium sativum is present in the topically administered composition. □	Padmanabhan; Sreeni	Yu; Gina C.
6	Pharmaceutical compositions and methods for reducing the appearance of cellulite	1/13/2004	US6676977	Compositions and methods for reducing or eliminating the appearance of cellulite. The method involves administering to a patient in need of treatment therapeutically effective amounts of a sugar compound that is converted to a glycosaminoglycan in the patient in an amount sufficient to thicken the skin, a primary antioxidant component in an amount sufficient to substantially inhibit the formation of collagenase and elastase, at least one amino acid component in an amount sufficient to assist in the thickening of the skin, and at least one transition metal component in an amount effective to bind collagen and elastic fibers and thicken skin so as to reduce or eliminate the appearance of cellulite. A preferred method of treatment further includes administering the components above in conjunction with a vascular dilator to improve blood supply to the skin and/or a fat burner to reduce absorption or digestion of fat in the digestive tract or to prevent the production of fat. The compositions and methods may optionally include chromium picolinate to facilitate entry of sugar into cells to improve fat metabolism	What is claimed is:□ 1. A method for reducing or eliminating the appearance of cellulite in a person in need of such treatment comprising administering to the person:□ a sugar compound that is converted to a glycosaminoglycan in the patient in an amount sufficient to thicken the skin;□ a primary antioxidant component in an amount sufficient to substantially inhibit the activity of collagenase and elastase in the skin;□ at least one amino acid component in an amount sufficient to assist in the thickening of the skin; and□ at least one transition metal component in an amount effective to bind collagen and elastic fibers and thicken skin;□ at least one of either a fat burner to reduce absorption of fat in the digestive tract or prevent the production of fat, or a vascular dilator to improve blood supply to the skin; and□ chromium picolinate in an amount sufficient to facilitate entry of sugar into cells to improve metabolism of fats by the body.□	Tate; Christopher R.	Flood; Michele C.

	A	B	C	D	E	F	G
1	**PATENTS CLAIMING TREATMENT OF CELLULITE**						
2	Title	Grant Date	Publication Number	Abstract	First or Exemplary Claim	Examiner - Primary	Examiner - Assistant
7	Lipid extract of the Skeletonema algae	9/10/2002	US6447782	The invention relates to a novel lipid extract of the algae Skeletonema, especially the algae Skeletonema costatum. In particular, this extract is a total lipid extract of said algae. It can be obtained by extracting the algae Skeletonema in an organic solvent which has a polarity index p' of less than about 5.4, preferably of between 2 and 4.5 and particularly preferably of between 4.2 and 4.4, and which is acceptable in the cosmetic or pharmaceutical industry. This extract can be used as an active principle for the manufacture of a cosmetic or pharmaceutical composition particularly for producing a slimming, anti-cellulite, skin anti-ageing or sensitive skin treatment.	What is claimed is:□ 1. A method of cosmetic care selected from the group consisting of a slimming care, a cellulite-reducing care and a care delaying the appearance or development of cellulite, comprising applying to skin areas of a person in need thereof, a cosmetically effective amount for said care of a lipid extract of the algae Skeletonema obtained by extraction in an organic solvent.□	Lankford, Jr.; Leon B.	Davis; Ruth A.
8	Pharmaceutical compositions for reducing the appearance of cellulite	3/19/2002	US6358539	Compositions and methods for reducing or eliminating the appearance of cellulite. The method involves administering to a patient in need of treatment therapeutically effective amounts of a sugar compound that is converted to a glycosaminoglycan in the patient in an amount sufficient to thicken the skin, a primary antioxidant component in an amount sufficient to substantially inhibit the formation of collagenase and elastase, at least one amino acid component in an amount sufficient to assist in the thickening of the skin, and at least one transition metal component in an amount effective to bind collagen and elastic fibers and thicken skin so as to reduce or eliminate the appearance of cellulite. A preferred method of treatment further includes administering the components above in conjunction with a vascular dilator to improve blood supply to the skin and/or a fat burner to reduce absorption or digestion of fat in the digestive tract or to prevent the production of fat. The compositions and methods may optionally include chromium picolinate to facilitate entry of sugar into cells to improve fat metabolism	What is claimed is:□ 1. A pharmaceutical composition for reducing or eliminating the appearance of cellulite in a patient comprising:□ a sugar compound that is converted to a glycosaminoglycan in the patient in an amount sufficient to thicken the skin;□ a primary antioxidant component in an amount sufficient to substantially inhibit the activity of collagenase and elastase;□ at least one amino acid component in an amount sufficient to assist in the thickening of the skin;□ at least one transition metal component in an amount effective to bind collagen and elastic fibers and thicken the skin;□ at least one of either a fat burner to reduce absorption of fat in the digestive tract or prevent the production of fat, or a vascular dilator to improve blood supply to the skin; and□ chromium picolinate in an amount sufficient to facilitate entry of sugar into the cells to improve metabolism of fats by the body.□	Tate; Christopher R.	Flood; Michele C.
9	Uses for thyroid hormone compounds or thyroid hormone-like compounds	4/24/2001	US6221911	This invention relates to the use of topically applied thyroid hormone compounds and thyroid hormone-like compounds which are receptor binding ligands, either agonists or antagonists, to improve the appearance of the skin and underlying subcutaneous fat and improve certain medical conditions when applied topically. These compounds can be used to treat skin conditions such as stria, cellulite, roughened skin, actinic skin damage, intrinsically aged skin, photodamaged kin, lichen planus, ichthyosis, acne, psoriasis, wrinkled skin, corticosteroid atrophy, collagen deficient skin, and to diminish the size and improve the appearance of skin scarring from surgical or naturally occurring wounds, and to reduce the incidence of hyperkeratotic scarring. The thyroid agonists and antagonists may also promote differentiation and amelioration of dedifferentiated skin in premalignant lesions. The thyroid agonists and antagonists can be active in all organisms which contain the thyroid hormone receptors, notably amphibians, birds and subjects. Combination with Vitamin D analogs, glucocorticoids, and retir	What is claimed is:□ 1. A skin treatment composition for topical application, the composition comprising at least one thyroid hormone compound or thyroid hormone-like compound together with a pharmacologically acceptable base, wherein said thyroid hormone compound or thyroid hormone-like compound is a chemical entity which binds to TR-.alpha. or TR-.beta. with an equilibrium dissociation constant, K.sub.d, lower than 1 .mu.M, wherein□ K.sub.d =(R).multidot.(L)/(RL),□ where (R) is the concentration of receptor, (L) is the concentration of ligand, and (RL) is the concentration of the receptor-ligand complex, and wherein said skin treatment composition is effective for treating skin conditions.□	Jordan; Kimberly	
10	Cosmetic or cosmetic product for firming and soothing the skin in particular in the case of cellulite	6/6/2000	US6071526	The invention discloses a cosmetic product for topical administration in disturbed subcutaneous connective fatty tissue, in particular cellulite, where one or more substance(s) present in the product locally inhibit(s) the formation and/or action of estrogens in the subcutaneous fatty tissue. Suitable substances are, in particular, aromatase inhibitors and/or anti-estrogens. The cosmetic is effective in the cosmetic treatment of cellulite.	We claim:□ 1. A method of treating cellulite comprising locally and topically applying to skin a substance which inhibits the formation and/or action of estrogens thereby improving subcutaneous connective fatty tissue disturbances.□	Spear; James M.	

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1	**PATENTS CLAIMING TREATMENT OF CELLULITE**						
2	Title	Grant Date	Publication Number	Abstract	First or Exemplary Claim	Examiner - Primary	Examiner - Assistant
11	Slimming cosmetic composition containing a Chrysanthellum indicum extract	12/14/1999	US6001366	The invention concerns a slimming composition containing an chrysanthellum indicum extract with low concentration comprising 0.0001% to 0.1% of Chrysanthellum indicum dry extract equivalent. This composition is useful for the preventive and/or curative treatment of cellulitis.	What is claimed is:□ 1. Cosmetic slimming composition which can be administered topically for the preventive and/or curative treatment of cellulite,□ said cosmetic slimming composition comprising an extract of Chrysanthellum indicum at low concentration containing from 0.0001% to 0.1% of dry extract equivalents of Chrysanthellum indicum.□	Dodson; Shelley A.	
12	Method of reducing cellulite in mamalian skin	10/5/1999	US5962482	The present invention relates to a method for combating cellulite or reducing localized fatty excesses which comprises administering to a person having cellulite or localized fatty excesses a body slimming amount of a composition containing niacinamide.	What is claimed is:□ 1. A method of treating and/or preventing cellulite by administering a safe and effective amount of a skin care composition to a mammal having, or prone to forming cellulite, comprising:□ a). a safe and effective amount of niacinamide; and□ b). a dermatologically acceptable carrier for the niacinamide.□	Henley, III; Raymond	
13	Cosmetic or pharmaceutical composition containing an andiroba extract	9/28/1999	US5958421	The subject of the invention is the use of a lipid extract of Andiroba for the inhibition of glucose-6-phosphate dehydrogenase and its application to the inhibition of adipocyte differentiation.	We claim:□ 1. A method for inhibiting glucose 6-phosphate dehydrogenase in adipocytes, which comprises:□ applying to a skin a cosmetic or pharmaceutical composition comprising 0.01-100% by weight of a lipid extract of Andiroba.□	Fonda; Kathleen K.	
14	Cosmetic or cosmetic product for firming and smoothing the skin, in particular in the case of cellulite	8/31/1999	US5945109	The invention discloses a cosmetic product for topical administration in disturbed subcutaneous connective fatty tissue, in particular cellulite, where one or more substance(s) present in the product locally inhibit(s) the formation and/or action of estrogens in the subcutaneous fatty tissue. Suitable substances are, in particular, aromatase inhibitors and/or anti-estrogens. The cosmetic is effective in the cosmetic treatment of cellulite.	We claim:□ 1. A cosmetic product for topical administration on skin over disturbed subcutaneous connective fatty tissue which comprises a substance which inhibits the formation and/or action of estrogens and which originates from soya glycins.□	Page; Thurman K.	Spear; James M.
15	Herbal cellulite treatments	1/6/1998	US5705170	The invention provides a herbal cellulite treatment employing, in preferred embodiments, topical treatments, both method and cosmetic composition, wherein a refined lipophilic extract, and preferably also a refined aqueous extract of a Malvaceae plant, preferably whole Hibiscus Abelmoschus, are applied to the skin overlying cellulite-afflicted tissues. The treatments are intended to last at least four, and preferably eight or more weeks. Clinical tests show suprisingly superior results to those obtainable with aminophylline compositions. Inventive treatments can reduce thigh diameters and fatty layer thickness, as well as skin condition. In vitro tests show remarkable lipolytic properties, apparently attributable to .beta.-receptor stimulation, and valuable lipogenesis inhibition properties apparently attributable to .alpha..sub.2 -blocking. Preferred extracts show low toxicity.	We claim:□ 1. A cellulite treatment composition comprising:□ a) a cosmetic base;□ b) from about 0.1 to about 10.0 percent by weight of the treatment composition of a refined aqueous extract of Hibiscus Abelmoschus rich in proteins; and□ c) from about 0.01 to about 10.0 percent by weight of the treatment composition of a refined lipophilic extract of Hibiscus Abelmoschus rich in sphingolipids said refined extracts being present in a relative proportion of from about 1 to about 7 parts of aqueous extract per part of lipophilic extract;□ said composition being topically effective when applied to cellulite afflicted tissue to reduce fatty tissue deposits.□	Venkat; Jyothsan	

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1	**PATENTS CLAIMING TREATMENT OF CELLULITE**						
2	Title	Grant Date	Publication Number	Abstract	First or Exemplary Claim	Examiner - Primary	Examiner - Assistant
16	Skin care compositions for treating cellulite	9/16/1997	US5667793	Anti-cellulite compositions based on a lipolytic active, which is an extract of Polygala tenuifolia, an extract of Platycodon grandiflorum, or an extract of Kochia scoparia. When Polygala tenuifolia or Platycodon grandiflorum is employed, a polar solvent extract is preferred. The extracts are preferably employed in conjunction with a xanthine, e.g. caffeine or theophylline (which are preferably obtained from a natural source), in order to lower the cost of the compositions.	What is claimed is:□ 1. A method of reducing the signs of cellulite, the method comprising applying onto the skin, the composition comprising:□ (a) from about 0.0001 to about 5%, by weight of the composition, of a plant extract selected from the group consisting of a polar extract of Polygala tenuifolia, an extract of Platycodon grandiflorum, an extract of Kochia scoparia, and mixtures thereof; and□ (b) a cosmetically acceptable vehicle.□	Venkat; Jyothsan	
17	Method of ameliorating cellulite by disrupting the barrier function of the stratum corneum	12/24/1996	US5587396	New topically applied treatments for cellulite are shown by comparative data to effect structural improvements in cellulite-afflicted thigh area tissues including skin-thickening, thigh-firming and thigh-reduction. The disclosed treatments disrupt the skin's water barrier and elevate trans-epidermal water loss (TEWL) for extended periods of weeks or months and include methods of mechanical or solvent action, for example, tape stripping, or acetone washes. Preferred treatments use creams with active ingredients such as lactic acid to elevate TEWL, a retinoid, preferably vitamin A palmitate to disrupt barrier rebuilding and prolong elevation of TEWL levels, and a cerebroside to inhibit lipid synthesis and intensify the TEWL elevation. Diuretics, for immediate esthetic improvements, anti-irritants and anti-oxidants for irritation control are optional ingredients.	I claim:□ 1. A method of ameliorating a cellulite condition comprising application of a topical treatment composition to skin areas overlying cellulite, said treatment composition being effective to chronically disrupt the barrier function of the stratum corneum and to inhibit barrier repair until a desired amelioration of cellulite is achieved.□	Geist; Gary	Carr; Deborah D.
18	Cosmetic compositions for reducing or preventing signs of cellulite	7/16/1996	US5536499	The invention is directed to increasing the strength and firmness of the skin and reducing the signs of cellulite. The inventive method includes applying to the skin a composition that includes inositol phosphate, particularly phytic acid and its salts, in a cosmetically acceptable carrier.	What is claimed is:□ 1. A method for enhancing collagen synthesis and thereby reducing signs of cellulite, the method comprising topically applying to the skin a cosmetic composition comprising from about 0.5% to about 30% by weight of an inositol phosphate and from about 70% to about 99.5% by weight of a cosmetically acceptable carrier.□	Gardner; Sallie M.	
19	Skin treatment compositions for prevention and reduction of cellulite	6/4/1996	US5523090	Skin treatment compositions for improving skin strength and firmness and reducing signs of cellulite. The compositions contain a xanthine (e.g., caffeine or theophylline) and an inositol phosphoric acid, and/or alpha hydroxy acid. The ratio of the xanthine to the acid is in a specific range to maintain the xanthine in a solubilized state. A method of preventing or reducing the signs of cellulite by applying a mixture of an inositol phosphoric acid and an alpha hydroxy acid is also disclosed.	What is claimed is:□ 1. A skin treatment composition comprising:□ (i) a xanthine in an amount of from about 0.05% to about 20% wherein the xanthine is selected from the group consisting of caffeine, theophylline and mixtures thereof;□ (ii) phytic acid, wherein the weight ratio of xanthine to the acid is from about 2:1 to about 0.001:1; and□ (iii) a cosmetically acceptable vehicle.□	Venkat; Jyothsan	

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1	**PATENTS CLAIMING TREATMENT OF CELLULITE**						
2	Title	Grant Date	Publication Number	Abstract	First or Exemplary Claim	Examiner - Primary	Examiner - Assistant
20	Topical slenderizing formulation containing cafeine carboxylic acid derivatives neutralized by organic bases, preparation thereof, and their use in the treatment of cellulite	7/9/1991	US5030451	The present invention relates to topical compositions containing caffeine carboxylates with organic bases, which are useful as slenderizing agents and in the treatment of cellulitis, as well as their preparation. The heterogeneous topical compositions of the invention contain, as active principle, a caffeine carboxylic acid which has been salified with a cosmetologically-acceptable organic base, the active principle preferably being present in the form of microparticles or microgranules suspended in a hydroalcoholic gel.	We claim:□ 1. Heterogeneous cosmetic composition which can be used as a slenderizing agent or in the treatment of cellulitis, which comprises, an active principle selected from the group consisting of 3-nicotinol caffeine carboxylate, triethanolamine caffeine carboxylate, -pyrrolidinoethanol caffeine carboxylate and creationol caffeine carboxylate, said active principle being present in the form of microgranules or microparticles, in an amount between about 0.5 and 20% by weight of the total composition, and which microgranules or microparticles are heterogeneously distributed and suspended in a gel comprising water and a non-toxic alcohol in which they are insoluble.□	Page; Thurman	Piccone; Louis A.